In addition, new mines have been laid by multi-barrelled rocket launchers which can spray very large numbers of mines over a very wide area. These were being laid on the outskirts of Jalalabad in the summer of 1989 and around Kandahar in the autumn of 1989.

The agencies responsible for providing and/or funding medical care for Afghans were concerned about the standards of care that were being received. They had noticed a great demand for teaching material and the lack of standardisation in the manuals that are available. Examples were given of manuals which gave contradictory advice.

They were particularly worried by the effect that the numerous training courses for mid-level workers had had on the health care inside Afghanistan with their different course lengths and titles. While it was generally agreed that some medical care is usually better than no medical care, the ad hoc training that has taken place has now to be standardised. Estimates given of the numbers of people who had attended courses (of which UNHCR thought there had been 30-40 different ones) were in the thousands, many of whom called themselves or were called doctors. In addition, false papers were presented by 'doctors' graduating in Kabul in recent years, although they had stopped issuing diplomas after 1980 for either doctors or nurses.

The agencies felt that the Afghan doctors are avid for educational material, many of them having been trained to be general practitioners. Some showed photographs of inadequate surgery such as amputations which had left uncovered bone protruding. They also thought that nursing staff needed better training and a manual which would include stump care and treatment of burns. There was general agreement amongst the agencies that training manuals are needed, and that ones on amputation and limb surgery and nursing procedure would be particularly welcome.

The WHO are attempting to coordinate training in their Afghan programme; to assist NGO's to standardise their training for midlevel workers and to run refresher courses for doctors. With only one training Coordinator this is a difficult task, but it was felt that the manuals suggested would be of assistance and not a duplication.

EXISTING MANUALS.

An examination was made of relevant manuals that are available. Those that exist on war surgery (1,2,3,4,5) cover the whole subject; in a manual of some 200 pages only three or four may relate to amputation surgery. This does not

adequately deal with the subject of the surgical let alone the related topic of limb fitting. (One manual on surgery included an illustrated section on amputations which showed immediate suture of the wound, which is contraindicated in a war injury). The same is true for limb surgery which is also dealt with very briefly in the manuals, but requires a comprehensive coverage if it is to be of use to the surgeons in the field.

Manuals for mid-level workers have been produced by many of the NGO's involved in their training, some good (6) and some not so good. They vary in quality and in the instructions they give. It would be preferable if, until there is standardisation in the training, there were a manual defining the care to be given by these mid-level workers when faced with injuries, so that the patient's life and perhaps limb may be saved.

One manual on basic nursing procedure is in draft form and could be published for field testing. No manuals have been identified for use by western trained nurses coming to third world countries and/or war zones for the first time.

DISTRIBUTION OF MANUALS.
There are recognised channels through which manuals could be distributed to those able to make use of them; WHO, NGO's, the Agency Coordinating Body for Afghan Relief (ACBAR) and Afghan organisations. In addition copies of all manuals and teaching material could be held at the ACBAR Resource and Information Centre (ARIC) with information about how they can be obtained. ARIC will also be able to organise translations into Dari and Pushtu, the two major languages of Afghanistan.

CONCLUSIONS.

1. The present situation for Afghans physically injured in the war could be improved both in Afghanistan and in Pakistan; there is a dearth of qualified medical staff, of standardised training and of educational, and of training material.

2. Those carrying out amputation and limb surgery feel their ability to do so should be improved. At present they include:

    i) those with no qualifications at all
    ii) those with medical training ranging from 2 days to 18 months

iii) physicians with no surgical training at all
iv) surgeons with little experience of amputations, prosthetics, or war surgery
v) orthopaedic surgeons with little experience of related surgery needed for limb injury in war situations.

3. The current situation results in:

i) the production of inadequate amputation stumps which in turn makes the fitting of artificial limbs difficult.
ii) inadequate limb surgery which produces unnecessary disability in patients.

4. There is an immediate need for a manual on war amputation surgery, limb fitting and prosthetics. This should be written by an orthopaedic surgeon with a knowledge of limb fitting, prosthetics and war surgery.

5. A manual is needed on war limb surgery; it should be a compilation of surgical techniques, ranging from plastic to vascular and would therefore have to be written by more than one person.

6. A manual is needed for mid-level workers which deals with the actions necessary when faced with trauma.

7. Manuals are needed for nurses; on basic nursing procedure and for Western trained nurses on nursing care of patients injured by war, and in 'third world' and tropical countries.

8. Should these manuals be produced they would all be in great demand, they should therefore be produced as quickly and cheaply as possible and made widely available. They would have worldwide application.

9. The need for good amputation and limb surgery for Afghanis likely to continue well into the next century because of the immense problem of mines in the country

RECOMMENDATIONS.

1. That more staff and resources be put into the training of medical personnel of all kinds.

2. That a manual be produced as a matter of urgency on war amputation surgery which incorporates limb fitting and prosthetics. (See outline in Appendix C)

3. That a manual be produced on limb surgery with an editor appointed to collate the work of the necessary specialists.

4. That a manual be produced for mid-level workers on the correct procedures (excluding amputation) for patients with war injuries.

5. That a manual on basic nursing procedures be produced (or reproduced if an existing one is found to be appropriate)

6. That a search be made for manuals for western trained nurses coming to work in third world countries with tropical climates and/or war conditions. If none are available then they should be produced.

REFERENCES.

1. 'Surgery for War Victims'. D. Dufour et al. International Committee of the Red Cross.

2. 'War Emergency Surgery'. NATO Handbook. Department of National Health and Welfare, Canada.

3. 'War Surgery suppliments', British Journal of Surgery. Wright, Bristol.

4. 'Surgery of Trauma', Bowers W.F. et al. J.B. Lippincott Company, Philedelphia.

5. 'Chirurgie', Manual technique des principales interventions chirurgicales pour médecin exerçant en situation d'isolement. Medicins sans Frontieres. Paris.

6. 'Medical Guide for Afghan Paramedics'. Freedom Medicine, Project Pakistan.

APPENDIX A.

LIST OF PEOPLE AND AGENCIES CONSULTED.

ISLAMABAD.

United Nations High Commission for Refugees:
- Chief of Mission — Ane Willem Bieleveld.
- Senior Health Coordinator — Richard Nesbit.
- Information Coordinator — Jane Repp.

United Nations Office of the Coordinator for Afghanistan (Operation Salam):
- Chief of Mission — Martin Barber

QUETTA.

Handicap International:
- Director — Dominique Gerard.
- Coordinator for Programmes in Afghanistan. — Pascal Simon.
- Coordinator for programmes in Afghanistan. — Elizabeth Pirnay.

Health Unlimited: — Dr Alistair Lipp

Director of the UK De-mining Programme. — Col. Rob Hyde Bailes.

Islamic Aid Health Centre:
- Director — Dr Haqani.

International Committee of the Red Cross:
- Head of Sub-Delegation — Yves Giovannoni.
- Head Nurse — Glen Eyes.
- Chief Surgeon — Carlo Paccitti.
- Physician — Pius Meier
- Orthopaedic Surgeon — Uwe Carlsson

United Nations High Commission for Refugees:
- Head of Sub Delegation — Michael Gabaudan.

United Nations Office of the Coordinator for Afghanistan:
- Programme Officer — Marilee Kane.

PESHAWAR.

Afghan Female Surgical Hospital: — Dr Saida Barakzai.

(Appendix A Cont.)

Afghan Information Centre:
- Director — Naim Majrooh.

Afghan Interim Government:
- Minister for Public Health — Dr Najibullah Mujaddidi.
- Deputy Minister — Dr Mohammed Yacoub Barakzai.

Afghan Trauma Hospital:
- Head Nurse — Susan Pollock.
- Deputy Head Nurse — G.K. Sadullah.
- Orthopaedic Surgeon — Dr Najatti.
- Surgeon — Dr Naim.

Agency Coordinating Body for Afghan Relief:
- Executive Director — Ted Albers.
- Deputy Director — Willem Homan.

ACBAR Research and Information Centre:
- Director — Nancy Dupree.

Commissioner for Afghan Refugees:
- Information Officer — Shah Zaman.

Ibnesina Hospital:
- Consultant Orthopaedic Surgeon. — Dr Dadras.

International Committee of the Red Cross:
- Chief Medical Officer — Dr Mick C. Van Joost.
- Head of Rehabilitation — Dr Aanba Soopramanien.
- Orthopaedic Technologist — Joe Obiedo.
- Acting Head Nurse — Clare Collins.
- Physiotherapist — Ann Mari Thorsen.

Kuwaiti Red Crescent:
- Head Nurse — Ms Zubaida.

Lady Reading Hospital Peshawar:
- Orthopaedic Surgeon and Dean of the Postgraduate Medical School. — Dr Jamil Ahmed Khan.

Medecins Sans Frontiers:
- Directors — Robert Saleon Terras. Bernard Choumilier.

Medical Training for Afghans:
- Chief Surgeon — Dr Philip Boidin.
- Physician — Dr Elizabeth Kind.

Norwegian Committee for Afghanistan:
- Nurse Midwife — Carol Chamberlain.

Pakistan Red Crescent Society:
- Director — Colonel Shah.
- Head of Rehabilitation Centre. — Major Youssef.

Peshawar Training Centre for Orthopaedic Technologists:
- Head Orthopaedic Workshop and Training Programme — Jorgen Fischer.

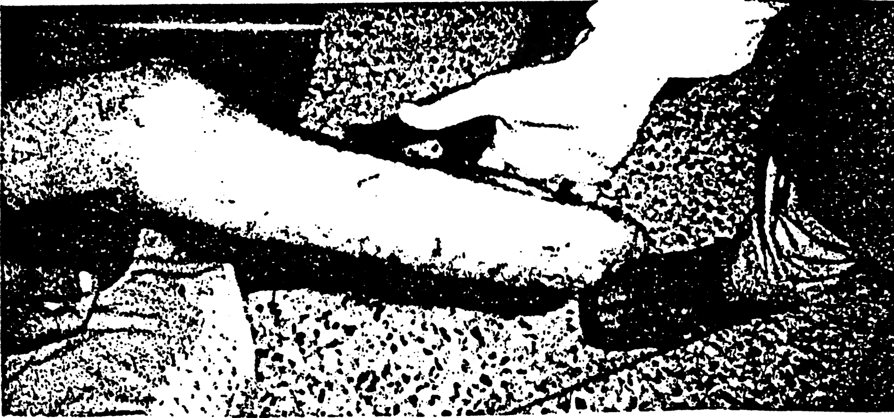
Sandy Gall Afghanistan Appeal:
- Senior Project Manager and Prosthetist. — Leslie Johnstone.
- Deputy Project Manager and Physiotherapist. — Chris Greetham.
- Orthotist — Jon Wright.
- Physiotherapist — Jackie Stokell.

Swedish Committee for Afghanistan:
Dr Annika Janson.

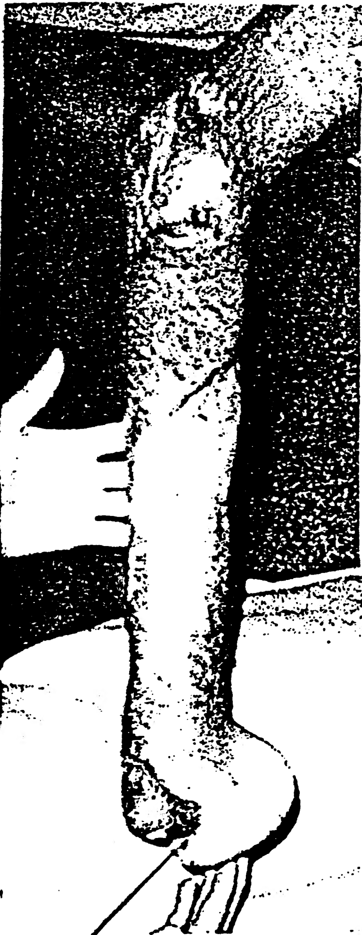
United Nations High Commission for Refugees:
- Head of Sub Delegation — Anthony Land.
- Project Officer Health Coordination. — Mamouna Taskinuddin.
- Rehabilitation Officer — Eva Savosnick.

United Nations Office of the Coordinator for Afghanistan:
- Head of Sub Mission — Michael Keating.

World Health Organisation:
- Head of Sub Delegation — Rudi Cornix.
- Training Coordinator — Dr Sharon Mcdonnell.



A long amputation stump with the possibility of later complications.



A failed Chopart amputation unsuitable for fitting.



A long AK amputation which has broken down.

APPENDIX C.

PROPOSED CONTENTS OF A MANUAL ON WAR AMPUTATION SURGERY, LIMB FITTING AND PROSTHETICS.

Suggested 45,000 to 50,000 words with approximately 40 line drawings.

'THE REPORT OF A FEASABILITY STUDY ON THE NEED FOR A MANUAL ON THE SURERY OF PHYSICALLY DISABLED AFGHANS WITH EMPHASIS ON AMPUTATION SURGERY AND PROSTHETICS'.

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Lately Director of Medical Services,
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ELIZABETH WINTER
Director, Personnel and Co-ordination
Sandy Gall Afghanistan Appeal

INTRODUCTION.

This study was undertaken for two reasons; one of the authors had noted in the course of her work that surgery for Afghan patients with limb injuries could be improved and the other author had noted that there is no manual which covers amputation surgery and prosthetics. The background to the study was informed by their respective experience; one of the services provided for Afghans in Pakistan and Afghanistan and the other of war surgery and prosthetics.

The main aim of the study was to examine the need for a manual on amputation surgery and prosthetics and make proposals accordingly. Findings include an assessment of the present situation and a summary of the views obtained from a cross section of the agencies and people involved in providing medical and other relevant services.

Conclusions are drawn about the need for the manual on amputation surgery and requirement for other manuals which became apparent during the course of the study.

We are grateful to all the agencies and individuals who gave their unstinting assistance and time. Without their help, we could not have accomplished our task.

PRIMARY AIM.

To examine the need for a manual, or manuals, to be used by those carrying out amputations and caring for amputees in war conditions.

BACKGROUND.

The effective care of war wounds, infection, surgical treatment and delayed suture is crucial. The surgical care of war wounds demands a different technique from that of 'cold surgery'. Surgical training takes place in peacetime

APPENDIX D.

GLOSSARY.

ACBAR	Agency Coordinating Committee for Afghan Relief.
AIG	Afghan Interin Government.
ARIC	Afghan Information Centre.
HI	Handicap International.
ICRC	International Committee of the Red Cross.
NATO	North Atlantic Treaty Organisation.
NGO	Non-overnment Organisation.
PETCOT	Peshawar Training Centre for Orthopaedic Technologists.
SGAA	Sandy Gall Afghanistan Appeal.
UNHCR	United Nations High Commission for Refugees.
WHO	World Health Organisation.

so even well qualified civilian surgeons may not know of the appropriate treatment needed for war injuries. There is a problem of timing and the critical 'six hour period' after wounding which dictates the type of surgery to be employed. At six hours, the bacteria in the wound are multiplying vigorously, and spreading into the tissue, and spreading into the body.

The specialisation of doctors involved in surgery in civilian practice results in surgeons calling in appropriate specialist colleagues to deal with their section of the surgical problem. Thus when treating a mangled limb in civilian practice it is possible to have a vascular surgeon dealing with the vascular problems, an orthopaedic surgeon dealing with the bones and a plastic surgeon dealing with skin coverage. In war surgery, the surgeon is usually dealing with the injuries alone and therefore requires a wide range of surgical skills and experience. Surgeons on short-term contracts coming directly from civilian practice will have difficulties initially with amputations and amputees, let alone those doctors without surgical training.

In civilian practice casualties are dealt with soon after injury and undergo operation in sterile conditions by trained staff. In war conditions, especially in developing countries, delays and inadequate initial care mean that patients are either infected, or potentially infected, with dead tissue which acts as a breeding ground for large scale infection. Treatment should be directed at surgical removal of any source of infection, complete drainage of the wound and a delayed primary or secondary suture of the skin at a later date.

The performance of an amputation has two aims. Firstly in war conditions it may well be a life-saving procedure. Secondly, it has to produce an amputation stump that allows the fitting of an artificial limb which will permit the amputee to live as normal a life as possible. An amputation is not an end result, but a prelude to rehabilitation. To achieve success the amputation must be carried out at the correct level on the limb and in a manner that allows the best fitting of the artificial limb.

The various forms of amputation follow a well defined protocol which has been established through years of experience and agreement between surgeons and prosthetists (those who make and fit artificial limbs or prostheses). In war surgery, where the injuries are not of course standard, it is essential for the surgeon to know the principles of prosthetic fitting in order to achieve the best possible

stump on which to fit a comfortable prosthesis. It is often not possible to achieve a perfect stump at the correct level and it is then up to the immediate judgement of the surgeon whether to create an imperfect stump that at the right level, or to provide a perfect stump at a higher level on the limb. To make the best decision, the surgeon must have a knowledge of prosthetics and of the quality of the prosthetists and prostheses available locally.

In civilian practice there is the backup of an adequate prosthetic service with fully qualified prosthetists where the surgeon can turn for advice on limb-fitting, for few surgeons had prosthetics as part of their training. Under war conditions qualified prosthetists are generally not available and so the surgeon's knowledge of prosthetics becomes even more important.

Correct initial assessment, correct primary surgical care of the wound, good surgical amputation technique with a knowledge of prosthetics and good postoperative care are all essential to successful rehabilitation.

METHOD OF INVESTIGATION.

Visits were made to the capital of Pakistan, Islamabad, and to the two main cities dealing with Afghan refugees, Quetta (capital of Baluchistan Province), and Peshawar (capital of the North West Frontier Province). Discussions were held with, and opinions sought from, a variety of people involved in providing or receiving medical and related services. The services themselves were visited and existing educational material and manuals were examined.

The following is a summary of the investigation, for a comprehensive list of those consulted please see Appendix A.

i) Afghan amputees were seen in hospital wards, in outpatient clinics and at prosthetic workshops. They included women and children, although the majority were men. Amputees were questioned about how they had received their injuries and the treatment they had obtained . In most cases an assessment of the quality of the amputation stump was made and, in a representative sample, photographs were taken.

ii) Discussions were held with doctors who are involved in the care and treatment of amputees; Afghan, Pakistani and Western. Some were qualified as surgeons, some had further training as orthopaedic surgeons, others had specialities such as paediatrics and some were

relatively newly qualified. Some of those interviewed had carried out surgery in Afghanistan while others were based at hospitals in Pakistan.

iii) Discussions were held with nurses who are involved in the care and treatment of amputees either in hospitals in Pakistan or inside Afghanistan.

iv) The following prosthetic workshops were visited:

Handicap International (HI), Quetta
International Committee of the Red Cross (ICRC), Peshawar
Sandy Gall Afghanistan Appeal (SGAA), Lady Reading Hospital, Peshawar, and at the Integrated Training Centre, Hayatabad.
Peshawar Training Centre for Orth. Technologists (PETCOT), Khyber Hospital, Peshawar.

Discussions were held with the staff of these workshops i.e. the prosthetists and orthotists involved in the provision of artificial limbs, and the Afghan trainees and physiotherapists.

v) Meetings were held with agencies responsible for the provision of medical care and related services;

a) from the United Nations - the High Commission for Refugees (UNHCR), the Office of the Co-ordinator for Humanitarian and Economic Assistance programmes relating to Afghanistan (UNOCA also known as Operation Salam), the De-mining Programme and the World Health Organisation (WHO).

b) from the Pakistan Government - the Commissioneriate for Afghan Refugees.

c) from the Afghan organisations - the Ministry of Public Health of the Afghan Interim Government (AIG).

d) a cross-section of the Non-Governmental agencies providing medical care and training.

vi) Existing manuals available in Pakistan were examined, as well as textbooks on war surgery that are available in the West and information was sought at the two information centres in Peshawar.

FINDINGS

PRESENT SITUATION.
The war in Afghanistan has been fought in a conventional way except for the widespread use of anti- personnel and anti-tank mines which are causing a large number of casualties to the population. This extensive and indiscriminate use of antipersonnel mines to deny ground will mean that casualties from mines will continue to occur well into the next century or until the mines are cleared or have become inactive through decay.

Casualties travel to the nearest aid, where the remains of a limb may be severed, by a variety of means: animal or motorized transport or by litter. This first aid may be provided by those with a few weeks or months training ('mid-level workers' to use the definition used by the World Health Organisation, Peshawar). It may be provided by Westerners attached to relief agencies working inside Afghanistan, these may be nurses or midwives or doctors who are often not trained in surgery.

First aid is also provided by medical staff at the first aid posts (FAM) run by the International Committee of the Red Cross (ICRC). These are established in the border areas of Afghanistan and Pakistan and their doctors and/or medical assistants can resuscitate, give intravenous fluids and antibiotics and arrange for transport by ambulance to their hospitals in Peshawar or Quetta. Here the definitive surgery will be performed.

The injuries seen amongst war casualties receiving treatment in Pakistan are to a degree selected by the conditions. Head, chest and abdominal wounds may well not survive the long journeys without proper medical facilities. Limb injuries and amputations form a large proportion (70% at the ICRC hospital) because of their higher survival rates.

Journey times to medical care do not take as long as they used to, partly because of the ambulance services and mobile units now provided by ICRC and NGO's, and partly because roads and river beds are navigable in some areas. They will depend on where the fighting takes place and for those living some distance from the border it can take up to a week and occasionally longer to reach a hospital. This can result in grossly infected wounds and the patients may therefore have amputations carried out in the field, often by unqualified personnel.

There are many hospitals in Pakistan to which the casualties

are taken; those run by the Pakistan Government, the Afghan political parties and Afghan Interim Government (AIG) and those such as the Kuwaiti and Saudi Red Crescent as well as the ICRC hospital. In all of these hospitals there is a dearth of educational material.

Facilities for the rehabilitation of the Afghan war wounded in Pakistan are rudimentary and patchy. In the case of amputees artificial limbs are provided by several agencies which each have their own methods and training programme. (See paper 'A Report on Selected Services for Afghans' WV James FRCS)

THE NEED FOR MANUALS.

PATIENT REQUIREMENTS.

The patients interviewed did not usually know whether the person who amputated their limb was qualified to do so or not; they had little choice in the matter in Afghanistan. The quality of the stumps examined showed the lack of expertise used in many cases (see photographs in Appendix B). Sixty amputation stumps were examined, and it was found that 40% did not conform to normal prosthetic standards. Even allowing for the problems of war surgery, this was too high. Some 25% of amputation stumps were in need of some form of revision to produce a stump that would be completely satisfactory for limb fitting. This need is accentuated if the quality of the prosthetists is not high enough to overcome difficult fitting problems. The patients wanted good prostheses, which are comfortable, light weight and cosmetically acceptable, and this goal is obviously easier to reach if the stump is adequate in the first place. Imperfect fitting of artificial limbs is not conducive to adequate rehabilitation, allowing the amputee to return to a full and active life.

THE REQUIREMENTS OF QUALIFIED SURGEONS.

The surgeons who are practising acute war surgery were unanimous that a manual on war amputation surgery incorporating prosthetics and rehabilitation is needed. In addition, they strongly recommended a manual on limb surgery. They wanted these manuals to be aimed at surgeons faced with patients injured in the limb who required techniques in limb, vascular and plastic surgery as well as amputations. (Although many of the injuries were caused by mines -less so when the people had to stay inside when under bombardment - there is also a large number caused by high velocity bullets). They felt that such manuals would be used in war situations elsewhere in the world.

Several expatriate surgeons who were on up to three month contracts, felt that their training in civilian practice ill-prepared them for the surgery of war wounds. They were used to the care of trauma at an early stage before gross infection had set in. in adequate hospitals with adequate staff. and with specialist colleagues at hand. The necessary techniques of war surgery were not a part of civilian practice. and the short time they were in a war situation gave little time for them to adapt. A preparatory manual with some detail would ease the transition.

The surgeons felt that they had a lack of expertise in these fields. Lack of instruction in the basic principles of amputations. limb fitting and prosthetics meant that in unplanned amputations. such as those found in warfare. there is difficulty in deciding on the appropriate level of amputation.

An Afghan orthopaedic surgeon told of having to deal with patients with extreme complications following amputations carried out inside Afghanistan. without anaesthesia or sterile conditions and of tourniquets being applied wrongly and left on for so long that an amputation became necessary.

They felt that the best ways of improving the medical care for those with injuries to limbs are to speed the transport of patients to the surgeons and for them to be taught by experienced surgeons. However. since neither of these is usually possible. manuals were essential. Only the ICRC hospitals had any sort of library available to their staff but the text books were not thought to be detailed enough and the Afghan surgeons working in other hospitals had almost no books available. They have a great desire for books and teaching material. particularly if translated into Dari and Pushtu.

The question of the manual falling into the hands of unqualified people was addressed. This was not thought to be a major problem. If the manuals are distributed to qualified personnel through reputable channels they would improve the teaching standards. Mid-level workers should have a manual of their own. but in any case were not thought likely to have access to those of the surgeons or to use them if they did.

THE VIEWS OF PHYSICIANS.
Many of the physicians seen had had experience inside Afghanistan and described what happens there. They told of unqualified people doing amputations: for example a mid-level worker (with a one month first aid course) in Urozgan carrying out operations in people's houses. He charges 40-

50,000 Afghanis for the operation whereas the cost of transport to the nearest first-aid post is 60,000 Afghanis (about £1000 sterling). There is the man known as the "Butcher of Helmand", Mohammed Kasim, who has also been doing amputations, though less so now that there is an ICRC post nearby. He works from 5 am to midnight, trains people in first aid, employs mid-level workers and runs a small provincial health care system. He has had no training himself and uses 'Where there is no Doctor'.

For situations like this, the physicians recommended a standardised manual for mid-level workers instructing in the principles of saving life and limb, and basic instruction on resuscitation, hygiene, restricted use of a tourniquet, and leaving war wounds unsutured initially. Those who had been involved in training courses for mid-level workers used to teach amputation techniques. They no longer do so as it was found to be unwise and most now taught regularisation of wounds instead.

The physicians also described their own needs: one paediatrician found himself having to perform an amputation, another doctor said she was "scared to death" when in Afghanistan at the injuries confronting her. All doctors who were interviewed would welcome manuals. These they would like to be on both amputations and limb surgery, to be cheap, to be translated into Dari and Pushtu. No-one was aware of an existing manual on limb trauma.

Afghan doctors had very often not had the opportunity to take part in formal training programmes because the war had interrupted their studies. It was difficult to get hold of textbooks even in Kabul.

THE OPINIONS OF NURSING STAFF.

Nursing staff tend to be on longer term contracts than the doctors and therefore felt they had an better overview. They had observed that each surgeon had different ideas about the correct operation procedures, often according to the ones of their home nation. This was confusing for staff and the nurses felt that a manual, particularly on limb surgery, would be a good idea. They also felt that manuals would improve the quality of amputations in the field, thus reducing the need for the numbers of re-amputations that they saw.

The nurses also welcomed the idea of a manual for mid-level workers, particularly one that warned against tourniquets. One nurse, who had just returned from Afghanistan, described how she had two men brought to her in two days who had been

injured by mines. One had lost one leg and badly injured the other when his new tractor hit a mine in his field. He died from his injuries. The other sustained his injury walking along a road; his leg was blown off and she was faced with regularising the wound, debridement and removal of the kneecap. He survived.

The suggestion was made by several nurses that manuals should be available for them; the first describing the situations and sights they are likely to encounter in war situations, the second on nursing in 'third world' and tropical countries. The manual for nursing in war zones would include psychological preparation as well as explanations of techniques such as debridement and the injuries that can be expected. The second manual was thought necessary because nurses trained in developed countries would no nothing about cholera, typhoid, dysentery, or malaria which could result in very sick patients and nurses feeling at a loss. None of the nurses seen was aware of the existence of any such manuals.

A further manual they recommended was one on basic nursing procedure. Nursing has not attained the status of a profession in either Pakistan or Afghanistan, although improvements in training had begun in Afghanistan before the war. There is therefore a wide variety of ability amongst the nursing staff inside Afghanistan and in the hospitals in Pakistan. Training for Afghan nurses is done on the job; in the Kuwaiti Red Crescent Hospital they are trained by the doctors, in others by expatriate nurses. Again there is a dearth of teaching material and both those giving training and those receiving or in need of it would welcome a basic manual.

A nursing procedures manual is needed to improve patient care and to ensure that nursing training reaches an agreed basic standard. One manual is in the process of being produced and this is available for field-testing.

THE VIEWS OF AGENCIES.

Those responsible for training in mine clearing and mine awareness were able to give statistics which underline the fact that the problem of mine injuries will continue well after the war ends ,and that services should be improved to meet these needs. Afghanistan is said to the biggest minefield in the world; it is estimated that there are 10-30 million anti-tank and anti- personnel mines of twenty-seven varieties. Any maps that were available are now out of date and while some mines will self-destruct, others will remain active for decades.

THE REPORT OF A FEASIBILITY STUDY ON THE NEED FOR A MANUAL ON THE SURGERY OF PHYSICALLY DISABLED AFGHANS WITH EMPHASIS ON AMPUTATION SURGERY AND PROSTHETICS.

W.V. James F.R.C.S.

E. Winter.

CONTENTS.

THE AUTHORS.

W.V. James F.R.C.S.

William V. James spent 25 years in Belfast, Northern Ireland, as a Consultant Orthopaedic Surgeon, coming there from the Federation of Rhodesia and Nyasaland, where he was Senior Orthopaedic Surgeon. In Northern Ireland he was also the Director of the Rehabilitation Engineering Centre and Chairman of the Prosthetic, Orthotic and Aids Service. On his retirement from the National Health Service in 1988, he was appointed Director of Medical Services of the Disablement Services Authority of England and Wales, which was an interim Authority charged with upgrading the Limb and Appliance Centres of England and introducing them to a rehabilitation role.

He has also been involved in the field of prosthetic, orthotic, rehabilitation and surgical education, and has advised Zimbabwe and Nigeria on setting up rehabilitation services. He is presently Chairman of the London School of Prosthetics, on the Board of the National Centre for Training and Education in Prosthetics and Orthotics at the University of Strathclyde, and on the Advisory Council of the College of Occupational Therapists.

Elizabeth Winter.

For some years she has been involved in the setting up and running of non-Government Organisations in the United Kingdom and overseas. She has been working with agencies involved with Afghanistan since the beginning of the war; the Sandy Gall Afghanistan Appeal, Afghan Aid, Afghan Refugee Information Network, and she chairs the Project Committee of the British Agencies Afghanistan Group. She is currently involved in evaluating the work of some of the NGO's, and recruiting staff for them.